Novel in-treatment dose verification methods for adaptive radiotherapy

Propositions belonging to the thesis

Novel in-treatment dose verification methods for adaptive radiotherapy

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1. Integrated transit planar portal dosimetry might hide relevant dose differences delivered by highly dynamic treatments like VMAT. This thesis

2. Inter-fractional trends in portal dosimetry can identify relevant dose discrepancies and trigger adaptive actions. This thesis

3. Time-resolved portal dosimetry is the future of in-treatment dose monitoring for dynamic treatments. This thesis

4. Portal dosimetry can play an essential role in informed decision-making for adaptive radiotherapy. This thesis

5. Incidents have alerted national safety authorities and, as a consequence, several countries are currently developing regulations demanding *in vivo* dosimetric verification of radiotherapy. Anton Mans

6. Quality control of a linear accelerator, pre-treatment and treatment dose verification, as well as *in vivo* dosimetry methods using EPIDs is now routinely in use in a growing number of clinics. Wouter van Elmpt

7. *In vivo* dosimetry is recommended by many national and international organizations as a safety tool to avoid major errors. Ben Mijnheer

8. All of science is nothing more than the refinement of everyday thinking. Albert Einstein, 1879 - 1955

9. Learning is a source of happiness. Leonardo Da Vinci, 1452 - 1519

10. Immersed in the wonder of the way, you can deal with whatever life brings you, and when death comes, you are ready. Lao Tzu, 6th BC

11. Het vreemde aan promoveren is dat je lang hard moet werken en in sommige gevallen daardoor één letter voor je naam moet weglaten, het verschil tussen drs. en dr. Lucas Persoon.